HAVEN J. & BONNIE RAE BARLOW MANUFACTURING TECHNOLOGY BUILDING OUTLINE SPECIFICATIONS

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HAVEN J. & BONNIE RAE BARLOW MANUFACTURING TECHNOLOGY BUILDING
Davis Applied Technology College
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OUTLINE SPECIFICATIONS

Division 8 - DOORS AND WINDOWS

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SECTION 02230 - SITE CLEARING

1.1 SUMMARY

A. Removing existing plants and grass.

B. Clearing and grubbing obstructions, trees, shrubs, grass, and other vegetation including grinding stumps and removing roots and debris.

C. Stripping and stockpiling topsoil and stockpiling surplus topsoil.

D. Providing temporary erosion and sedimentation control measures.

END OF SECTION 02230

SECTION 02300 - EARTHWORK

1.1 SUMMARY

A. Preparing subgrades for slabs-on-grade walks pavements lawns and grasses exterior plants.

B. Excavating and backfilling or filling for buildings and structures, including footings and foundations .

C. Excavating and backfilling for utility trenches.

D. Excavation: Unclassified.

E. Grading.

F. Subsurface drainage backfill for walls and trenches.

G. Subbase course for concrete walks and pavements.

H. Subbase course for hot-mix asphalt pavement.

I. Drainage course for cast-in-place concrete slabs-on-grade.

1.2 MATERIALS

A. Soil Materials:

1. Satisfactory Soils: ASTM D 2487 soil classification groups.
2. Unsatisfactory Soils: ASTM D 2487 soil classification groups.
3. Backfill and Fill: Satisfactory soil materials.
4. Subbase Course: Natural or crushed gravel, crushed stone, and natural or crushed sand.
5. Engineered Fill: Natural or crushed gravel, crushed stone, and natural or crushed sand.
6. Bedding Course: Natural or crushed gravel, crushed stone, and natural or crushed sand.
7. Drainage Course: Crushed stone, or crushed or uncrushed gravel.
8. Filter Material: Natural or crushed gravel, or crushed stone and natural sand.
9. Sand: Natural or manufactured.
10. Impervious Fill: Clayey gravel and sand mixture.

B. Controlled low-strength material.

C. Warning Tape: Detectable polyethylene film.

1.3 EXCAVATION

A. Explosives: Not permitted.

B. Disposal of Surplus and Waste Materials: Off Owner's property.

1.4 FIELD QUALITY CONTROL

A. Geotechnical Testing Agency: Owner engaged.

END OF SECTION 02300

SECTION 02510 - WATER DISTRIBUTION

1.1
SUMMARY

A. Combined water service and fire-service mains outside the building.

1.2 SUBMITTALS

A. Coordination Drawings.

1.3 QUALITY ASSURANCE

A. Quality Standard for Electrical Components, Devices, and Accessories: NFPA 70.

B. Quality Standard for Materials, Installations, Tests, Flushing, and Valve and Hydrant Supervision for Fire-Service-Main Piping: NFPA 24.

C. Quality Standard for Plastic Potable-Water-Service Piping: NSF 14. Include marking "NSF-pw" on piping.

D. Quality Standard for Water-Service Piping and Specialties for Domestic Water: NSF 61.

E. Quality Standard for Fire-Service-Main Products: FMG's "Approval Guide."

1.4 MATERIALS

A. Underground Water-Service Piping NPS 3/4 to NPS 3:

1. Soft copper tube and copper solder-joint fittings.

B. Underground Combined Water-Service and Fire-Service-Main Piping:

1. Ductile-iron, grooved-end pipe and ductile-iron-pipe appurtenances.

C. Piping Specialties:

1. Transition fittings.
2. Tubular-sleeve pipe couplings.
3. Split-sleeve pipe couplings.
4. Flexible connectors.
5. Dielectric fittings.

D. Corrosion-Protection Piping Encasement: Required.

1.5 MANUFACTURED UNITS

A. Gate Valves:

1. Cast Iron: OS&Y, rising stem, C509, 250 psig.
2. UL/FMG, Cast Iron: OS&Y, rising stem.
3. Bronze: UL/FMG, OS&Y, rising stem.

B. Check Valves: UL/FMG, 250 psig.

C. Butterfly Valves: UL/FMG.

D. Backflow Preventers:

1. Double-check, backflow-prevention assemblies.

END OF SECTION 02510

SECTION 02530 - SANITARY SEWERAGE

1.1 SUMMARY

A. Gravity-flow, nonpressure sanitary sewerage outside the building.

1.2 PERFORMANCE REQUIREMENTS

A. Gravity-Flow, Nonpressure, Drainage-Piping Pressure Rating: 10-foot head of water.

1.3 COMPONENTS

A. Cleanouts: PVC.

B. Manholes: Standard precast concrete.

1. Resilient pipe connectors.
2. Reinforced-concrete grade rings.
3. Manhole frames and covers.

1.4 INSTALLATION

A. Gravity-Flow, Nonpressure Sewer Piping Applications:

1. NPS 4: ABS, SDR 35, sewer; PVC sewer; or Nonreinforced-concrete sewer pipe.
2. NPS 5 and NPS 6: ABS, SDR 35, sewer; PVC sewer; or Nonreinforced-concrete sewer pipe.
3. NPS 8 and NPS 10: ABS, SDR 42, sewer; PVC sewer; or Nonreinforced-concrete sewer pipe.

END OF SECTION 02530

SECTION 02630 - STORM DRAINAGE

1.1 SUMMARY

A. Gravity-flow, non-pressure storm drainage outside the building.

1.2 PERFORMANCE REQUIREMENTS

A. Gravity-Flow, Nonpressure, Drainage-Piping Pressure Rating: 10-foot head of water.

1.3 COMPONENTS

A. Cleanouts: PVC.in landscape; cast iron in paving.

B. Drains: Gray-iron area drains.

C. Manholes: Standard precast concrete.

1. Resilient pipe connectors.
2. Reinforced-concrete grade rings.
3. Manhole frames and covers.

D. Catch Basins: Standard precast concrete.

1. Frames and grates.

E. Stormwater Inlets: gutter type.

1.4 INSTALLATION

A. Gravity-Flow, Nonpressure Sewer Piping Applications:

1. NPS 4 to NPS 6: Corrugated PE drainage; ABS, SDR 35, sewer; PVC sewer; or Nonreinforced-concrete sewer pipe.
2. NPS 8 to NPS 12: Corrugated PE drainage; ABS, SDR 42, sewer Corrugated PE drainage PVC sewer Nonreinforced-concrete sewer pipe.
3. NPS 15: Corrugated PE drainage; PVC profile gravity sewer; or Nonreinforced-concrete sewer pipe.
4. NPS 18 to NPS 36: Corrugated PE drainage; PVC sewer; or Reinforced-concrete sewer pipe.

END OF SECTION 02630

SECTION 02741 - ASPHALT PAVING

1.1 SUMMARY

A. Hot-mix asphalt paving.

B. Pavement-marking paint.

1.2 QUALITY ASSURANCE

A. Regulatory Requirements: of UDOT Standard Specification for Road and Bridge Construction.

1.3 MATERIALS

A. Asphalt Materials:

1. Asphalt Binder: AASHTO M 320 or AASHTO MP 1a.
2. Asphalt Cement: ASTM D 3381 for viscosity-graded material ASTM D 946 for penetration-graded material.
3. Prime Coat: Asphalt emulsion prime coat.
4. Tack Coat: Emulsified asphalt or cationic emulsified asphalt.

B. Auxiliary Materials:

1. Herbicide.
2. Pavement-Marking Paint: Alkyd-resin type.

C. Asphalt Mixes: Designed according to AI MS-2.

1. Base Course: ASTM D 3515, 1-inch maximum aggregate size.
2. Surface Course: ASTM D 3515, 1/2-inch maximum aggregate size.

1.4 INSTALLATION

A. Hot-Mix Asphalt Paving:

1. Proof-roll subgrade at locations receiving full-depth asphalt pavement.
2. Apply herbicide.
3. Apply prime coat over compacted unbound-aggregate base course.
4. Base Course: 12".
5. Surface Course: 5" for roadways, 4" for parking lots.

END OF SECTION 02741

SECTION 02751 - CEMENT CONCRETE PAVEMENT

1.1 SUMMARY

A. Curbs and gutters.

B. Walkways.

1.2 QUALITY ASSURANCE

A. Quality Standard: ACI 301, "Specification for Structural Concrete."

1.3 MATERIALS

A. Reinforcement:

1. Reinforcing Bars and Tie Bars: Epoxy-coated deformed or Galvanized deformed steel.
2. Synthetic Fiber: Fibrillated at the rate of 1.5#/CY.
3. Welded wire mesh not allowed.

B. Concrete:

1. Portland Cement: ASTM C 150 withFly Ash: ASTM C 618, Class F; maximum 15% by weight
2. Aggregate: Normal-weight aggregate.
3. Admixture: Air entraining- 6.5% plus-or-minus 1.5%.
4. Compressive Strength: 4000 psi at 28 days.
5. Water/Cement Ratio: 0.45%.

C. Membrane-Forming Curing Compound: White waterborne.

D. Related Materials:

1. Expansion- and Isolation-Joint-Filler Strips: Cellulosic fiber.

1.4 FINISHING

A. Finishes: Medium-to-coarse-textured broom finish.

1.5 FIELD QUALITY CONTROL

A. Testing: By Owner-engaged agency.

END OF SECTION 02751

SECTION 02810 - IRRIGATION SYSTEMS

1.1 PERFORMANCE REQUIREMENTS

A. Irrigation zone control shall be automatic operation with controller and automatic control valves.

B. Minimum Working Pressures:

1. Irrigation Main Piping: 200 psig.
2. Circuit Piping: 150 psig.

1.2 UNDERGROUND IRRIGATION MAIN PIPING

A. Pipe:

1. Schedule 40 Schedule 80, PVC pipe and Schedule 80 PVC or “Harco” ductile iron socket fittings, and solvent-cemented joints.

1.3 CIRCUIT PIPING

A. Pipe:

1. SDR 26, PVC, pressure-rated pipe; Schedule 40, PVC socket fittings; and solvent-cemented joints.

1.4 DRAIN PIPING

A. Schedule 40, PVC pipe and socket fittings; and solvent-cemented joints.

1.5 ABOVEGROUND, SHUTOFF-DUTY VALVES

A. NPS 2 and Smaller:

1. Brass or bronze ball valve.

B. NPS 2-1/2 and Larger:

1. Iron ball valve.

1.6 THROTTLING-DUTY VALVES

A. NPS 2 and Smaller:

1. Bronze automatic control valve.

B. NPS 2-1/2 and NPS 3:

1. Bronze automatic control valve.

1.7 DRAIN VALVES

A. NPS ½ and NPS 3/4: Bronze gate valve.

B. NPS 1 to NPS 2: Bronze gate valve.

1.8 MANUFACTURED UNITS

A. Automatic Control Valves: Bronze- by Orbit coordinate with DATC campus standard.

B. Pop-up, Impact-Drive Rotary Sprinklers: Plastic by Orbit- coordinate with DATC campus standard.

C. Surface, Pop-up Spray Sprinklers: Plastic- by Orbit with DATC campus standard..

D. Boxes for Automatic Control Valves: Plastic.

END OF SECTION 02810

SECTION 02920 - LAWNS AND GRASSES

1.1 SUMMARY

A. Sodded turf.

1.2 MAINTENANCE SERVICE

A. Turf: 30 days from date of Substantial Completion.

1.3 MATERIALS

A. Turfgrass Sod: Local mix with low water requirement.

B. Planting Soils: Existing, in-place surface soil, amended with inorganic and organic soil amendments and fertilizers in specified quantities.

C. Pesticides.

1.4 INSTALLATION

A. Planting Soil Depth for Newly Graded Subgrades: 4 inches.

B. Surface Soil Enrichment Depth for Unchanged Subgrades: 4 inches.

END OF SECTION 02920

SECTION 02930 - EXTERIOR PLANTS

1.1 WARRANTY

A. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.

B. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.

C. Annuals: Three months.

1.2 MAINTENANCE SERVICE

A. Trees and Shrubs: Three months.

B. Ground Cover and Other Plants: Three months.

1.3 MATERIALS

A. Plants, General: Nursery-grown and complying with ANSI Z60.1.

B. Annuals and Biennials: Healthy and acclimated to outdoor conditions.

C. Planting Soils: Existing, in-place surface soil, amended with inorganic and organic soil amendments and fertilizers in specified quantities.

D. Lightweight On-Structure Planting Soil: Modified planting soil.

E. Mulches: Ground or shredded bark and crushed stone or gravel.

F. Weed-Control Barriers: Nonwoven fabric.

G. Herbicides: Registered and approved by EPA pre-emergent and post-emergent herbicide(s).

H. Tree Stabilization: Upright staking and tying.

I. Landscape Edgings: Concrete.

J. Root barrier.

1.4 INSTALLATION

A. Planting Soil Depth: 6 inches.

B. Mechanized tree spade planting of designated trees.

C. Pruning.

D. Ground Cover and Plant Planting: Space ground cover and plants other than trees, shrubs, and vines 24 inches apart in even rows with triangular spacing.

E. Mulching:

1. Trees and Tree-like Shrubs in Turf Areas: Organic mulch ring of 2-inch thickness with 12-inch] 24-inch radius.
2. Planting Areas: 2-inch average thickness of organic mulch extending 12 inches beyond edge of individual planting pit or trench and over whole surface of planting area.

END OF SECTION 02930

Section 03300 - CAST-IN-PLACE CONCRETE

1.1 SUMMARY

A. Cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

1. Footings.
2. Foundation walls.
3. Slabs-on-grade.

1.2 QUALITY ASSURANCE

A. Quality Standard: ACI 301.

B. Mockups to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship.

1.3 MATERIALS

A. Form-facing materials.

B. Steel Reinforcement:

1. Reinforcing Bars: Deformed Steel bar mats.

C. Concrete Materials:

1. Portland Cement: ASTM C 150, Type I/II, gray, supplemented with fly ash.
2. Aggregate: Normal weight.
3. Water.
4. Admixtures: High range, water reducing.

D. Curing Materials: Clear, waterborne, membrane-forming curing, dissipating compound.

E. Sealer: Seal floors to be left exposed with Ashford Formula.

F. Related Materials: Expansion- and isolation-joint-filler strips.

1.4 CONCRETE MIXTURES

A. Compressive Strength (28 Days):

1. Footings: 3000 psi.
2. Foundation Walls: 3500 psi.

3. Slabs-on-Grade: 4000 psi.

B. Mixing: Ready mixed.

1.5 INSTALLATION

A. Formed-Surface Finish: Smooth.

B. Floor and Slab Finishes:

1. Scratch: Surfaces to receive mortar setting beds for bonded cementitious floor finishes.
2. Trowel: Surfaces exposed to view, and surfaces to be covered with resilient flooring carpet ceramic or quarry tile set over a cleavage membrane thin film-finish coating system.

1.6 FIELD QUALITY CONTROL

A. Testing: By Owner-engaged agency.

B. Inspections: By Owner-engaged special inspector.

END OF SECTION 03300

SECTION 03450 - ARCHITECTURAL PRECAST CONCRETE

1.1 SUMMARY

A. Architectural precast concrete cladding units.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Fabricator to design architectural precast concrete units.

1.3 QUALITY ASSURANCE

A. Installer: PCI-certified erector.

B. Fabricator: PCI-certified plant.

C. Design Standards: ACI 318 and PCI MNL 120.

D. Quality-Control Standard: PCI MNL 117.

E. Sample panels for each finish, color, and texture variation.

F. Mockups.

G. Preconstruction testing mockup.

1.4 MATERIALS

A. Reinforcing Materials:

1. Reinforcing Bars: Epoxy-coated steel

B. Concrete Materials:

1. Portland Cement: ASTM C 150, Type I or Type III.
2. Supplementary Cementitious Materials: Fly ash.
3. Aggregates: Normal weight.
4. Coloring admixture: Match existing
5. Admixtures: Air entraining and water reducing,

C. Steel Connections High-strength bolts and nuts.

1. Finish: Galvanized.

D. Grout: Nonmetallic, nonshrink.

E. Latex-portland cement pointing grout for thin brick unit joints.

F. Stone facing specified in Division 4 with stainless-steel anchors.

1.5 CONCRETE MIXTURES

A. Compressive Strength (28 Days):

1. Normal-Weight Concrete Face and Backup Mixtures: 5000 psi.
2. Lightweight Concrete Backup Mixtures: 5000 psi.

1.6 FABRICATION

A. Finishes: Medium sand blasted finish.

1.7 FIELD QUALITY CONTROL

A. Special Inspections: By Owner-engaged agency.

B. Testing and Inspections: By Owner-engaged agency.

END OF SECTION 03450

SECTION 03491 - GLASS FIBER REINFORCED CONCRETE

1.1 SUMMARY

A. Glass fiber reinforced concrete (GFRC) panels including panel frames, anchors, and connection hardware.

B. Application: Fascia units.

1.2 PERFORMANCE REQUIREMENTS

A. Design Loads: As indicated on Drawings.

1.3 QUALITY ASSURANCE

A. Manufacturer: PCI-Certified Plant.

B. Manufacturer to engineer GFRC panels.

C. Design Standard: PCI MNL 128.

D. Quality Standard: PCI MNL 130.

E. Mockups for each form of construction and finish.

1.4 MATERIALS

A. GFRC Materials:

1. Portland Cement: ASTM C 150, Type 1, II, or III, Match existing.
2. Glass fibers.
3. Facing aggregate.
4. Coloring admixture.
5. Polymer-curing admixture.
6. Air-entraining admixture.

B. Anchors and Connectors: Zinc coated.

C. Panel Frame Materials:

1. Cold-Formed Steel Framing: C-shaped steel studs, metallic coated.

D. Finishes: Sand blast.

END OF SECTION 03491

SECTION 04810 - UNIT MASONRY ASSEMBLIES

1.1 SUMMARY

A. Masonry Construction:

1. Single-wythe masonry.
2. Cavity walls.
3. Masonry veneer.
4. Installation of pre-cast trim.

1.2 PERFORMANCE REQUIREMENTS

A. Net-Area Compressive Strengths (f'_m) of Structural Unit Masonry: As indicated.

B. Determine net-area compressive strength (f'_m) of masonry by testing masonry prisms.

1.3 QUALITY ASSURANCE

A. Preconstruction Testing Service: Owner engaged, with payment by Owner.

B. 48" long by 48" high mockups of typical wall system.

1.4 MATERIALS

A. Concrete Masonry Units (CMUs):

1. Units made with integral water repellent for exposed units.
2. Concrete Masonry Units: Lightweight. 8" x 8" x 16", 8" x 10" x 16" modular

B. Sills, Lintels and trim pieces: precast concrete.

C. Brick: Face brick. 4" x 4" x 16" modular- match color of existing

D. Reinforcing Steel: Uncoated steel bars.

E. Masonry Joint Reinforcement:

1. Interior Walls: Mill carbon steel.
2. Exterior Walls: Hot-dip galvanized steel.

F. Ties and Anchors: Hot-dip Galvanized steel.

1. Adjustable Masonry-Veneer Anchors: Seismic.

G. Embedded Flashing:

1. Concealed (Flexible) Flashing: asphalt-coated copper.

a. Used with flashing terminations.

H. Weep/Vent Holes: Open head joints.

I. Cavity drainage material.

J. Reinforcing bar positioners.

K. Cavity-Wall Insulation: Extruded-polystyrene board.

L. Mortar: Match existing.

1. Masonry cement and mortar cement not allowed.

1.5 SOURCE QUALITY CONTROL

A. Testing Agency: Owner engaged, with payment by Owner.

1.6 INSTALLATION

A. Match existing masonry coursing, bonding, color, and texture.

B. Bond Pattern: Running bond.

1.7 FIELD QUALITY CONTROL

A. Testing Agency: Owner engaged, with payment by Owner.

END OF SECTION 04810

SECTION 05120 - STRUCTURAL STEEL

1.1 SUMMARY

A. Structural-steel framing.

1.2 QUALITY ASSURANCE

A. Fabricator Qualifications: AISC-Certified Plant.

B. Quality Standard: AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design."

1.3 MATERIALS

A. Structural-Steel Shapes: Tube and W shapes.

B. Bolts, Nuts, and Washers: High strength.

C. Connectors: Shear connectors.

D. Primer: Fabricator's standard, nonasphaltic.

E. Grout: Nonmetallic, shrinkage resistant.

1.4 FABRICATION

A. Shop Connections: high-strength bolts and welded connections.

B. Surface Preparation: SSPC-SP 2.

C. Galvanizing: Hot dip for ferrous metal exposed to weather .

1.5 SOURCE QUALITY CONTROL

A. Testing Agency: Owner engaged.

1.6 INSTALLATION

A. Field Connections: high-strength bolts and welded connections.

1.7 FIELD QUALITY CONTROL

A. Testing Agency: Owner engaged.

END OF SECTION 05120

SECTION 05210 - STEEL JOISTS

1.1 SUMMARY

A. Open-web K-series steel joists for roof framing.

B. KCS-type, open-web K-series steel joists for roof framing.

C. Joist girders for roof framing.

D. Joist accessories, including permanent bridging.

1.2 MATERIALS

A. Bolts: High-strength carbon steel.

1. Finish: Plain, uncoated.

B. Primer: SSPC-Paint 15.

C. Open-Web K-Series Steel Joists.

D. Joist Girders:

1. End Arrangement: Underslung.
2. Top-Chord Arrangement: Parallel.

1.3 INSTALLATION

A. Connections: Welded.

1.4 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage testing agency to inspect field welds and bolted connections.

END OF SECTION 05210

SECTION 05310 - STEEL DECK

1.1 SUMMARY

A. Roof deck.

1.2 MATERIALS

A. Roof Deck: Galvanized or Aluminum-zinc alloy-coated steel sheet.

1. Profile Depth: 1-1/2 inches.

B. Accessories: recessed sump pans.

1.3 INSTALLATION

A. Roof Deck: Welded.

1.4 FIELD QUALITY CONTROL

A. Testing Agency: Owner engaged.

END OF SECTION 05310

SECTION 05500 - METAL FABRICATIONS

1.1 SUMMARY

A. Miscellaneous metal framing and supports.

B. Loose metal plates and shapes.

C. Miscellaneous fabricated metal items.

1.2 PRODUCTS

A. Materials: Steel plates, shapes, and bars Steel tubing Steel pipe Slotted channel framing.

B. Miscellaneous Framing and Supports:

1. Steel framing and supports for overhead doors countertops applications where framing and supports are not specified in other Sections.
2. Galvanize at exterior locations.
3. Prime with zinc-rich primer where indicated.

C. Loose bearing and leveling plates , primed with zinc-rich primer.

D. Miscellaneous Steel Trim: .

1. Galvanize exterior locations.
2. Prime interior locations with zinc-rich primer.

E. Metal Ladders: Steel.

1. Prime interior locations with zinc-rich primer.

F. Metal Bollards: Schedule 40 steel pipe.

END OF SECTION 05500

SECTION 06105 - MISCELLANEOUS CARPENTRY

1.1 SUMMARY

A. Rooftop equipment bases and support curbs.

B. Wood blocking and nailers.

C. Plywood backing panels.

1.2 MATERIALS

A. Wood-Preservative-Treated Materials:

1. Preservative Treatment: AWPA C2 with chemicals containing no arsenic or chromium.

a. AWPA C31 (inorganic boron) may be used in protected locations.

2. Application: Items indicated and the following:

a. Items in contact with roofing or waterproofing.
b. Items in contact with concrete or masonry.
c. Framing less than 18 inches above ground in crawlspaces.

B. Fire-Retardant-Treated Materials:

1. Application: Items indicated and the following:

a. Concealed blocking.
b. Plywood backing panels.

C. Dimension Lumber Framing:

1. Maximum Moisture Content: 19 percent.
2. Other Framing: Construction or No. 2 grade hem-fir.

D. Plywood backing panels for telephone and electrical equipment.

E. Fasteners: Hot-dip galvanized steel where exposed to weather, in ground contact, in contact with treated wood, or in area of high relative humidity.

F. Metal Framing Anchors:

1. Metal: Hot-dip galvanized steel.

END OF SECTION 06105

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

1.1 SUMMARY

A. Interior standing and running trim.

B. Wood and plastic-laminate cabinets.

C. Solid-surfacing-material countertops.

D. Closet and utility shelving.

1.2 QUALITY ASSURANCE

A. Quality Standard: AWI.

1.3 MATERIALS

A. Wood Species and Cut for Transparent Finish: Red oak, plain sawn or sliced.

B. Composite Wood Products: Made without urea formaldehyde.

C. Cabinet Hardware:

1. Hinges: Frameless, concealed.
2. Pulls: Back mounted Wire.
3. Exposed Hardware Finishes: Satin chromium plated.

D. Interior Woodwork Grade: Custom.

E. Interior Standing and Running Trim for Transparent Finish:

1. Grade: Custom.
2. Wood Species and Cut: Red oak, plain sawn.

F. Wood Cabinets for Transparent Finish:

1. Grade: Custom.
2. AWI Type of Cabinet Construction: Flush overlay.
3. Wood Species and Cut for Exposed Surfaces: Red oak, plain sawn or cut.
4. Cabinet Interior: Thermoset decorative panels.

G. Plastic-Laminate Cabinets:

1. Grade: Custom.

2. AWI Type of Cabinet Construction: Flush overlay.
3. Cabinet Interior: Thermoset decorative panels.

H. Solid-Surfacing-Material Countertops:

1. Grade: Custom.
2. Thickness: ½ inch.

I. Closet and Utility Shelving: Custom grade.

J. Shop Finishing:

1. Grade: Same grade as woodwork.
2. Extent: All woodwork shop finished.

END OF SECTION 06402

SECTION 07511 - BUILT-UP ASPHALT ROOFING

1.1 SUMMARY

A. Built-up asphalt roofing system.

B. Vapor retarder.

C. Roof insulation.

D. Wood fiber or perlite cant and tapered edge strips.

1.2 PERFORMANCE REQUIREMENTS

A. Roofing System Design: Uplift pressures calculated according to ASCE 7.

B. FMG Listing: Class 1A-90

1.3 QUALITY ASSURANCE

A. Exterior Fire-Test Exposure: Class A.

B. Pre-installation conference.

1.4 WARRANTY

A. Manufacturer's Materials and Workmanship Warranty: 20 years.

B. Installer's Warranty: Two years.

1.5 MATERIALS

A. Sheathing paper. Red rosin. ASTM D549

B. Base Sheet: Asphalt-coated, glass-fiber sheet. Type II, ASTM D4601

C. Roofing Membrane Plies: Glass-fiber ply felts, Type VI: ASTM

D. Flashing Sheet:
   1. SBS-Modified Asphalt: White granular surfaced.

E. Roofing Asphalt: ASTM D 312, Type **IV**.

F. Aggregate Surfacing: Crushed stone.

G. Separator Sheet: Polyethylene sheet.

H. Vapor Retarder: Polyethylene sheet.

I. Roof Insulation: R-32 Polyisocyanurate board.

J. Cover Board: 3/4" Perlite insulation board.

K. Tapered Cover Board: 3/4" (Min) Perlite insulation board, minimum 1/4" per foot slope.

1.6 INSTALLATION

A. Roof Insulation: Mechanically fastened to roof deck.

B. Roofing Membrane System: Four ply sheets.

C. Roofing Membrane Surfacing: Aggregate.

1.7 FIELD QUALITY CONTROL

A. Testing Agency: Owner engaged.

END OF SECTION 07511

SECTION 07620 - SHEET METAL FLASHING AND TRIM

1.1 SUMMARY

A. Formed Low-Slope Roof Flashing and Trim:

1. Copings.

1.2 PERFORMANCE REQUIREMENTS

A. Copings: Capable of resisting Wind Zone 2 forces according to FMG Loss Prevention Data Sheet 1-49.

1.3 QUALITY ASSURANCE

A. Quality Standard: SMACNA's "Architectural Sheet Metal Manual."

1.4 MATERIALS

A. Sheet Metals for Flashing and Trim:

1. Prepainted, Metallic-Coated Steel: High-performance organic.

B. Underlayment: Polyethylene sheet.

END OF SECTION 07620

SECTION 07720 - ROOF ACCESSORIES

1.1 SUMMARY

A. Roof hatches.

1.2 QUALITY ASSURANCE

A. Sheet Metal Standard: SMACNA's "Architectural Sheet Metal Manual."

1.3 WARRANTY

A. Special Warranty on Painted Finishes: 15 years from date of Substantial Completion.

1.4 PRODUCTS

A. Roof Hatches: Prepainted, metallic-coated steel.

1.5 FABRICATION

A. Connections: Welded.

END OF SECTION 07720

SECTION 07920 - JOINT SEALANTS

1.1 SUMMARY

A. Exterior Joints in Vertical Surfaces and Horizontal Nontraffic Surfaces:

1. Control and expansion joints in unit masonry.
2. Joints between different materials listed above.
3. Perimeter joints around frames of doors windows.

B. Exterior Joints in Horizontal Traffic Surfaces:

1. Isolation and contraction joints in cast-in-place concrete slabs.
2. Joints between different materials listed above.

C. Interior Joints in Vertical Surfaces and Horizontal Nontraffic Surfaces:

1. Control and expansion joints on exposed interior surfaces of exterior walls.
2. Perimeter joints of exterior openings.
3. Control and expansion and inside corner joints in tile.
4. Vertical joints on exposed surfaces of interior unit masonry walls.
5. Perimeter joints between interior wall surfaces and frames of interior doors windows.
6. Joints between plumbing fixtures and adjoining walls, floors, and counters.

D. Interior Joints in Horizontal Traffic Surfaces:

1. Isolation joints in cast-in-place concrete slabs.

1.2 WARRANTY

A. Installer: Two years.

B. Manufacturer: Ten years.

1.3 MATERIALS

A. Elastomeric Joint Sealants: Liquid applied, chemically curing; ASTM C 920.

1. Pourable neutral-curing silicone sealants.
2. Nonsag neutral-curing silicone sealants.
3. Acid-curing silicone sealants.
4. Mildew-resistant neutral-curing silicone sealants.
5. Nonsag and Pourable urethane sealants.

B. Latex Joint Sealants: ASTM C 834, Type P, Grade NF.

C. Acoustical Joint Sealants: Latex.

D. Preformed Tape Sealants: Back-bedding mastic, butyl based.

E. Joint-Sealant Backing: Cylindrical Closed Cell Elastomeric tubing.

END OF SECTION 07920

SECTION 08110 - STEEL DOORS AND FRAMES

1.1 SUMMARY

A. Standard hollow metal doors and frames.

1.2 QUALITY ASSURANCE

A. Standard Hollow Metal Quality Standard: ANSI/SDI A250.8.

1.3 PRODUCTS

A. Standard Hollow Metal Doors:

1. Design: Flush panel.
2. Thermal-Rated Doors: Exterior.
3. Exterior Doors: 16 ga. Galvanized steel sheet faces.

    a. Model: 1 (Full Flush)
    b. Tob of Door: Provide closed top design sealed against water intrusion.

4. Interior Doors: 18 ga. cold-rolled steel sheet faces.

    a. Model: 1 (Full Flush).

B. Standard Hollow Metal Frames:

1. Exterior Frames: Galvanized steel sheet; face welded.

    a. 14 ga thick steel sheet.
    b. Rigid insulation

2. Interior Frames: Cold-rolled steel sheet; face welded.

    a. 16 ga thick steel sheet up to 4 foot opening, 14 ga. over 4 foot.

C. Finishes: Factory priming for field painting.

1.4 INSTALLATION

A. Concrete and Masonry Walls: Frames filled with grout.

END OF SECTION 08110

SECTION
08211 - FLUSH WOOD DOORS

1.1
QUALITY ASSURANCE

A. Quality Standard: AWI.

1. AWI Quality Certification Labels or an AWI letter of licensing for doors.

B. Fire-Rated Wood Doors: Comply with IBC for pressure testing.

1.2 DOOR CONSTRUCTION, GENERAL

A. Low-Emitting Materials: Made with adhesives and composite wood products that do not contain urea formaldehyde.

1.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Exterior Solid-Core Doors Not acceptable

B. Interior Solid-Core Doors:

1. Grade: Premium, with Grade A faces .
2. Species: Red oak.
3. Cut: Plain sliced (flat sliced), Quarter sliced, or Rift cut. Rotary cut is unacceptable.
4. Match between Veneer Leaves: Book; Slip or Pleasing match.
5. Assembly of Veneer Leaves on Door Faces: Balance match.
6. Edge: Matching veneer
7. Special Matching:

    a. Pair and set match.
    b. Room Match: Door faces of compatible color and grain within each room.
    c. Blueprint matching.

8. Core: Particleboard.
9. Construction: Five or seven plies, bonded.

C. Interior Hollow-Core Doors Not acceptable:

1.4 LOUVERS AND LIGHT FRAMES

A. Louvers: Not acceptable.

B. Light-Opening Frames:

1. Metal.

1.5 PRIMING/FINISHING

A. Factory Finishing: All doors.

B. Transparent Factory Finishes:

1. Grade: Premium.
2. Finish: Catalyzed polyurethane.
3. Effect: Semifilled finish.

END OF SECTION 08211

SECTION 08311 - ACCESS DOORS AND FRAMES

1.1 SUMMARY

A. Access doors and frames for walls and ceilings.

B. Floor access doors and frames.

1.2 QUALITY ASSURANCE

A. Fire-Rated Vertical Access Doors and Frames: NFPA 252 or UL 10B.

B. Fire-Rated Horizontal Access Doors and Frames: ASTM E 119 or UL 263.

1.3 PRODUCTS

A. Access Doors and Frames for Walls and Ceilings:

1. Type:

    a. Flush access doors and frames with exposed trim.
    b. Fire-rated, insulated, flush access doors and frames with exposed trim.

2. Material: Steel (except in restrooms); Stainless steel (in restrooms).
3. Fire-Resistance Rating: As required to match wall or ceiling rating..
4. Latch: Self-latching bolt operated by screwdriver with interior release.

B. Finishes:

1. Steel: Primed finish.
2. Stainless Steel: Directional satin, No. 4 finish.

END OF SECTION 08311

SECTION 08331 - OVERHEAD COILING DOORS

1.1 PERFORMANCE REQUIREMENTS

A. Basic Wind Speed, Exterior Doors: 90 mph. Operability under wind load is required.

1.2 DOOR ASSEMBLY

A. Insulated Service Door: Door curtain of galvanized steel with end locks, and wind locks.

B. Finish: Powder coated.

C. Hood: Galvanized steel.

D. Electric Door Operator: Standard duty, up to 60 cycles per hour.

1. Obstruction-detection device.
2. Momentary Contact Remote-control station.
3. Other Equipment: Audible and visual signals Radio-control system.

1.3 INSTALLATION

A. Factory-authorized representative to perform startup service and testing and train Owner's personnel.

END OF SECTION 08331

SECTION 08411 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

1.1 SUMMARY

A. Exterior storefront framing.

B. Exterior manual-swing entrance doors and door-frame units.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance:

1. Wind Loads: 20 psf.

1.3 MAINTENANCE SERVICE

A. Entrance Door Hardware: Twelve months.

1.4 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer.

B. Steel reinforcement.

1.5 FRAMING SYSTEMS

A. Framing Members: Manufacturer's standard extruded-aluminum framing members.

1. Construction: Thermally broken.
2. Glazing System: Retained mechanically with gaskets on four sides.

B. Brackets and reinforcements.

C. Fasteners and accessories.

D. Concrete and masonry inserts.

E. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing

F. Framing system gaskets and sealants.

1.6 GLAZING SYSTEMS

A. Glazing: As specified in Division 8 Section "Glazing."

B. Glazing gaskets.

C. Spacers and setting blocks.

D. Bond-breaker tape.

E. Glazing Sealants:

1. Weatherseal sealant.

1.7 ENTRANCE DOOR SYSTEMS

A. Entrance Doors:

1. Door Construction: 1-3/4-inch overall thickness.
2. Door Design: medium stile rails with 10" bottom rail and 5" top rail.
3. Glazing stops and gaskets.

B. Entrance Door Hardware: Division 8 Section "Door Hardware."

1.8 ALUMINUM FINISHES

A. Aluminum Finishes: Class II, clear or color anodic.

1.9 SOURCE QUALITY CONTROL

A. Structural-Sealant-Glazed Systems: Tested and inspected according to ASTM C 1401 recommendations.

END OF SECTION 08411

SECTION 08470 - REVOLVING ENTRANCE DOORS

1.1 SUMMARY

A. Four-wing, manual revolving entrance doors.

1.2 WARRANTY

A. Materials and Workmanship for Revolving Entrance Door Assemblies: Three years.

B. Materials and Workmanship for Speed-Control Units: Five years.

1.3 MAINTENANCE SERVICE

A. Full-Maintenance Service: 12 months.

1.4 COMPONENTS

A. Door Wings: Stile and rail.

1. Material: Extruded aluminum.
2. Glazing: Clear tempered glass.
3. Stile Design: Medium stile; 3-1/2-inch nominal width.
4. Diameter: 7' diameter.

B. Enclosure Walls: Curved with single-bend glass lites.

1. Material: Extruded aluminum.
2. Glazing: Clear tempered glass.

C. Ceilings: Metal-clad plywood or Metal.

D. Canopy and roof.

E. Floors: Mats.

F. Movable door-wing assembly to permit folded door wings to be moved to one side of door enclosure.

G. Fabrication: Mechanically joined construction.

H. Finishes:

1. Aluminum: Class I, clear anodic finish.

END OF SECTION 08470

SECTION 08520 - ALUMINUM WINDOWS

1.1 PERFORMANCE REQUIREMENTS

A. Engineering design of aluminum windows by Contractor.

B. Basic Wind Speed: 90 mph.

1.2 QUALITY ASSURANCE

A. Quality Standard: AAMA/WDMA 101/I.S.2/NAFS.

1.3 WINDOWS

A. Type: Fixed- thermal break construction

B. Sub Sill: Provide aluminum sub sill with vertical legs turned up at the back and ends and with all joints sealed to shed water to the outside of the building.

C. U-Factor: 0.43 Btu/sq. ft. x h x deg F or less.

D. Solar Heat-Gain Coefficient: Whole-window SHGC maximum of 0.50.

E. Glazing: Site glazed.

1. Glass: See Glazing Section.
2. Glazing System: Manufacturer's standard.

F. Finishes: Class II, clear or color anodic- Dark Bronze.

END OF SECTION 08520

SECTION 08620 - UNIT SKYLIGHTS

1.1 QUALITY ASSURANCE

A. Quality Standard: AAMA/WDMA 101/I.S.2/NAFS.

1.2 WARRANTY

A. Materials and Workmanship: Five years.

1.3 MATERIALS

A. Fiberglass-Sandwich-Panel Glazing: Translucent, fiberglass-reinforced-polymer face sheets with a grid core (Kallwall).

B. Glazing Gaskets: Manufacturer's standard.

1.4 UNIT SKYLIGHTS

A. Integral Curb: Extruded-aluminum, self-flashing type.

B. Thermal break.

C. Finishes: Class II, clear anodic.

END OF SECTION 08620

SECTION 08710 - DOOR HARDWARE

1.1 SUMMARY

A. Commercial door hardware for swinging doors.

1.2 MAINTENANCE SERVICE

A. Full-Maintenance Service: Twelve months.

1.3 PRODUCTS

A. Hinges:

1. Aluminum Doors: Gear type extruded aluminum heavy duty anodize to match window system
2. Interior: Brass or Steel.
3. Fire-Rated Assemblies: Steel.
4. Options: maximum security pin on outswinging exterior doors and nonremovable pins on outswinging corridor doors.

B. Continuous Hinges:

1. Gear Type: Extruded aluminum- HD.

C. Mechanical Locks and Latches:

1. Cylindrical Lockset Design: Best (no substitution- matching existing campus system) 9K series heavy duty lever locks Model 93K7 with Lost Motion (LM) option (allows lever to turn when locked) with 15K lever style.

D. Auxiliary Locks and Latches: Grade 1.

E. Door Bolts:

1. Dustproof Strikes: Grade 1.

F. Exit Devices: Sargent (no substitution- matching existing campus system).

1. Panic exit devices.
2. Fire exit devices.
3. Outside Trim: Match locksets and latchsets.

G. Cylinders and Keying:

1. Cylinders: High security.

a. Grade 1.
b. Number of Pins: Seven.
c. Cores: Interchangeable.

2. Construction Keying: Construction cores.
3. Keying System:

a. Great-grand master key.
b. Locks master keyed or grand master keyed to existing system.
c. All cylinders keyed alike.
d. Keys: Nickel silver.

H. Key-Control System:

1. Cabinet: Grade 1, wall mounted.
2. Index System: Multiple index, computer software.

I. Key lock boxes.

J. Operating Trim: Stainless steel.

K. Closers: LCN (no substituiton- matching existing campus system)

1. Surface: Grade 1.
2. Closer holder release devices.
3. Coordinators.

L. Protective Trim Units: Stainless steel.

M. Stops and Holders:

1. Stops and Bumpers.
2. Silencers for metal door frames w/o smoke seals.

N. Door Gasketing: As required for rating and acoustics.

O. Finishes: US 26D

1.4 FIELD QUALITY CONTROL

A. Occupancy Adjustment: Twelve months.

END OF SECTION 08710

SECTION 08800 - GLAZING

1.1 SUMMARY

A. Glazing required for the following:

1. Windows.
2. Doors.
3. Glazed entrances.
4. Interior borrowed lites.
5. Storefront framing.

1.2 WARRANTY

A. Deterioration of Coated Glass: Not less than 10 years.

B. Deterioration of Insulating Glass: Not less than 10 years.

1.3 MATERIALS

A. Glass Products:

1. Annealed Float Glass: Clear and Tinted.
2. Heat-Treated Float Glass: fully tempered.
3. Coated Float Glass: Pyrolytically or Sputter coated.
4. Wired Glass: Square pattern.
5. Insulating Glass: Manufacturer's standard dual-seal units.

B. Silicone Glazing Sealants: Neutral or basic curing, Class 25.

C. Glazing Tapes: Back-bedding-mastic type.

D. Glazing Gaskets: Dense compression.

1.4 GLASS UNITS

A. Monolithic Float-Glass Units:

1. 6 mm clear

B. Monolithic Wired-Glass Units:

1. 6 mm clear, square pattern

C. Insulating-Glass Units:

1. Tinted outer 6 mm lite, ½" air space, 6mm clear inner lite with low E coating on 3rd surface.

END OF SECTION 08800

SECTION 08911 - GLAZED ALUMINUM CURTAIN WALLS

1.1 SUMMARY

A. Conventionally glazed aluminum curtain walls installed as stick or unitized systems.

1.2 QUALITY ASSURANCE

A. Contractor to engineer glazed aluminum curtain-wall systems to comply with performance requirements.

1.3 WARRANTY

A. Assembly Warranty: 10 years.

1.4 COMPONENTS

A. Framing Systems: Aluminum with steel reinforcement (if required).

B. Glazing Systems:

1. Glazing: Specified in Division 8 Section "Glazing."
2. Gaskets: Pressure-glazing system.
3. Glazing Sealants: As recommended by manufacturer.

C. Aluminum Finishes: Class II, clear or color anodic.

1.5 FABRICATION

A. Provisions for field replacement of glazing from exterior.

END OF SECTION 08911

SECTION 09111 - NON-LOAD-BEARING STEEL FRAMING

1.1 SUMMARY

A. Non-load-bearing steel framing members for interior framing and suspension systems.

1.2 MATERIALS

A. Suspension Systems:

1. Wire hangers.
2. Flat hangers.
3. Carrying channels.
4. Furring channels.
5. Grid suspension systems for ceilings.

B. Steel Framing for Framed Assemblies:

1. Studs and runners: minimum 20 ga Space studs at 16" O.C.
2. Studs at door jambs: 16 ga. studs to structure or cross bracing.
3. Slip-Type Head Joints:

    a. Single long-leg runner.
    b. Double runner.
    c. Deflection track.

4. Firestop track.
5. Flat strap and backing plate.
6. Cold-rolled channel bridging.
7. Hat-shaped, rigid furring channels.
8. Resilient furring channels.
9. Cold-rolled furring channels.
10. Z-shaped furring.

END OF SECTION 09111

SECTION 09250 - GYPSUM BOARD

1.1 SUMMARY

A. Interior gypsum board.

1.2 MATERIALS

A. Interior Gypsum Board: Minimum 5/8" thick.

1. Regular type.
2. Type X.
3. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.
4. Moisture- and mold-resistant type.

B. Trim Accessories:

1. Interior- muddable types only where exposed to view.

1.3 INSTALLATION

A. Install gypsum board vertically unless the space is too high for single panels.

END OF SECTION 09250

SECTION 09310 - CERAMIC TILE

1.1 SUMMARY

A. Ceramic mosaic, paver, glazed wall and special-purpose tile.

B. Stone thresholds installed as part of tile installations.

C. Crack-suppression membrane for thin-set tile installations.

D. Metal edge strips installed as part of tile installations.

1.2 MATERIALS

A. Glazed Wall Tile Trim Shapes: Coved base Straight base Surface bullnose cap Bullnose external corner.

B. Ceramic Mosaic Trim Shapes: Coved base.

C. Thresholds: Marble.

D. Crack-Suppression Membranes: Chlorinated polyethylene sheet PVC sheet Polyethylene sheet Corrugated polyethylene Fabric-reinforced, modified-bituminous sheet Fabric-reinforced, fluid-applied rubber Urethane waterproofing and tile-setting adhesive.

E. Elastomeric Sealants: One-part, mildew-resistant silicone.

1.3 FLOOR TILE INSTALLATION SCHEDULE

A. Interior Floors on Concrete: Cement mortar bed bonded to concrete.

1. Tile Type: Unglazed ceramic mosaic tile.
2. Mortar: Latex- portland cement mortar bond coat.
3. Grout: Polymer-modified sanded grout.

B. Interior Floors on Crack-Suppression Membrane over Concrete: Thin-set mortar.

1. Tile Type: Unglazed paver tile.
2. Mortar: Latex- portland cement mortar bond coat.
3. Grout: Polymer-modified sanded grout.

1.4 WALL TILE INSTALLATION SCHEDULE

A. Interior Walls over Masonry or Concrete: Cement mortar bed.

1. Tile Type: Glazed wall tile.
2. Mortar: Latex- portland cement mortar bond coat.
3. Grout: Interior Walls over Masonry or Concrete: Cement mortar bed bonded to substrate.
4. Tile Type: Glazed wall tile.
5. Mortar: Latex- portland cement mortar bond coat.
6. Grout: Polymer-modified unsanded grout.

B. Interior Walls over Gypsum Board on Metal Studs: Organic adhesive.

1. Tile Type: Glazed wall tile.
2. Grout: Polymer-modified unsanded grout.

END OF SECTION 09310

SECTION 09511 - ACOUSTICAL PANEL CEILINGS

1.1 SUMMARY

A. Acoustical panels and exposed suspension systems.

1.2 QUALITY ASSURANCE

A. Acoustical Panel Quality Standard: ASTM E 1264.

B. Metal Suspension System Quality Standard: ASTM C 635.

1.3 MATERIALS

A. Acoustical Ceiling Panels:

1. Type and Form: Type III, mineral base with painted finish; Form 2, water felted.
2. Pattern: E (lightly textured) or G (smooth).
3. LR: Not less than 0.90.
4. NRC: Not less than 0.70.
5. CAC: Not less than 25.
6. Thickness: 3/4 inch.
7. Modular Size: 24 by 24 inches with reveal (tegular) edge.

B. Metal Suspension Systems:

1. Wire hangers, braces, and ties.
2. Hanger rods.
3. Angle hangers.
4. Seismic perimeter stabilizer bars, struts, and clips.
5. Wide-Face, Capped, Double-Web Steel: Intermediate duty.

C. Metal Edge Moldings and Trim: “Step” also known as “shadow” type edge molding.

D. Acoustical sealants.

1.4 INSTALLATION

A. Installation: UBC Standard 25-2.

END OF SECTION 09511

SECTION 09512 - ACOUSTICAL TILE CEILINGS

1.1 SUMMARY

A. Acoustical tiles directly attached to substrates with adhesive.

1.2 QUALITY ASSURANCE

A. Acoustical Tile Quality Standard: ASTM E 1264.

1.3 MATERIALS

A. Acoustical Ceiling Tiles:

1. Type III, mineral base with painted finish; Form 4, cast.
2. Color:White
3. Pattern: D (fissured).
4. LR: Not less than 0.70.
5. NRC: Not less than 0.70.
6. CAC: Not less than 25.
7. Thickness: 3/4 inch.
8. Modular Size: 12 by 12 inches.

B. Metal Edge Moldings and Trim: Extruded aluminum.

C. Acoustical sealants.

END OF SECTION 09512

SECTION 09653 - RESILIENT WALL BASE AND ACCESSORIES

1.1 PRODUCTS

A. Resilient Base:

1. Type (Material Requirement): TS (rubber, vulcanized thermoset).
2. Group (Manufacturing Method): I (solid).
3. Style: Cove (with top-set toe) for vinyl tile and sealed concrete
4. Style: Straight for carpet tile.
5. Minimum Thickness: 0.125 inch.
6. Height: 4 inches.
7. Lengths: Coils in manufacturer's standard length.
8. Outside Corners: Job formed.
9. Inside Corners: Job formed.
10. Surface: Smooth.

B. Resilient Molding Accessory: Rubber.

1. Transition strips.

C. Installation Materials:

1. Trowelable leveling and patching compounds.
2. Adhesives.

END OF SECTION 09653

SECTION 09681 - CARPET TILE

1.1 QUALITY ASSURANCE

A. Mockups for each type of carpet tile installation.

1.2 MATERIALS

A. Carpet Tile: (State Contract- DATC Campus Standard) Subject to compliance with requirements, provide one of the following:

1. Interface “Pathways” 182, IC50 CM, Style: 1672602S00, Color: 5691 Brown.

1.3 INSTALLATION

A. Installation Method: Glue down with releasable adhesive.

END OF SECTION 09681

SECTION 09912 - INTERIOR PAINTING

1.1 SUMMARY

A. Surface preparation and the application of paint systems on interior substrates.

1.2 QUALITY ASSURANCE

A. Quality Standards: "MPI Approved Products List" and "MPI Architectural Painting Specification Manual."

B. Mockups for each color and finish.

1.3 INTERIOR PAINTING SCHEDULE

A. CMU Substrates:

1. One coat latex block filler, two coats acrylic enamel.

B. Steel Substrates:

1. One coat primer, one coat undercoater, top coat alkyd enamel.

C. Galvanized-Metal Substrates: (roof deck)

1. Water-Based Dry-Fall System: MPI INT 5.3H.

D. Gypsum Board Substrates:

1. 2 coats acrylic enamel over primer.

END OF SECTION 09912

SECTION 10101 - VISUAL DISPLAY SURFACES

1.1 QUALITY ASSURANCE

A. Mockups for each form of construction.

B. Composite wood products made without urea formaldehyde.

1.2 WARRANTY

A. Materials and Workmanship for Porcelain-Enamel Face Sheets: 50 years.

1.3 PRODUCTS

A. Porcelain-Enamel Face Sheet: Manufacturer's standard steel.

B. Markerboard Assemblies: Porcelain enamel.

C. Tackboard Assemblies: Plastic-impregnated cork.

D. Sliding Visual Display Units:

1. Horizontal-Sliding Units: Two track.

E. Visual Display Conference Units: Wood cabinets.

F. Markerboard Tackboard Accessories:

1. Aluminum frames.
2. Trim: Factory-applied aluminum.
3. Chalktray: Box or Solid type.
4. Map rail with display rail clips.

G. Wood Species and Finishes: Red oak; natural lacquered finish.

H. Aluminum Finishes: Class II, clear anodic.

1.4 FABRICATION

A. Visual Display Boards: Factory assembled.

END OF SECTION 10101

SECTION 10155 - TOILET COMPARTMENTS

1.1 SUMMARY

A. Phenolic-core toilet compartments configured as follows:

1. Toilet-Enclosure Style: Overhead braced Floor anchored.
2. Urinal-Screen Style: Post to ceiling.

1.2 QUALITY ASSURANCE

A. Flame-Spread Index: 25 or less.

1.3 COMPONENTS

A. Phenolic-Panel Cores: Dark-color.

B. Urinal-Screen Post: square aluminum tube with satin finish.

C. Brackets (Fittings):

1. Full-Height (Continuous) Type: Stainless steel or clear anodized aluminum angles.

D. Hardware and Accessories: Institutional quality Stainless steel.

END OF SECTION 10155

SECTION 10522 - FIRE EXTINGUISHER CABINETS

1.1 PRODUCTS

A. Fire Protection Cabinet:

1. Type: For 10# fire extinguisher.
2. Construction: Nonrated or 1-hour fire rated, or 2-hour fire rated- coordinate with wall type.
3. Mounting: Semirecessed.
4. Door Style: Vertical duo panel with frame Center glass panel with frame.
5. Door Glazing: Tempered break glass.
6. Accessories: Door locks.
7. Finish: Door and Frame: Stainless-steel #4 finish.
8. Body: Steel, baked enamel or powder coated.

END OF SECTION 10522

SECTION 10523 - FIRE EXTINGUISHERS

1.1 SUMMARY

A. Hand-carried fire extinguishers.

1.2 QUALITY ASSURANCE

A. Fire Extinguishers: NFPA 10.

1.3 WARRANTY

A. Materials and Workmanship: Six years.

1.4 PRODUCTS

A. Portable, Hand-Carried Fire Extinguishers:

1. 4A60BC (10#)Multipurpose dry-chemical type, manufacturer's standard container with chrome plated brass valve (aluminum not acceptabel).

B. Mounting Brackets: Galvanized steel with identification lettering.

END OF SECTION 10523

SECTION 10801 - TOILET AND BATH ACCESSORIES

1.1 SUMMARY

A. Public-Use Washroom Accessories:

1. Toilet Tissue Dispenser: Not in Contract- vendor supplied.
2. Paper Towel Dispenser: Not in Contract- vendor supplied.
3. Waste Receptacle: Owner supplied garbage can.
4. Liquid-soap dispenser: Not in Contract- vendor supplied.
5. Grab bar: Stainless Steel, concealed fastners
6. Vendor: Sanitary napkin and tampon, Stainless Steel, Semi-recessed, coin operation.
7. Sanitary-napkin disposal unit: Stainless Steel
8. Mirror unit: Stainless Steel frame.

B. Childcare Accessories:

1. Diaper-changing station.

C. Underlavatory guards. (If using wall mounted sinks)

D. Custodial Accessories:

1. Stainless Steel Mop and broom holder with shelf.

1.2 WARRANTY

A. Silver Spoilage for Mirrors: 15 years.

END OF SECTION 10801

SECTION 11132 - PROJECTION SCREENS

1.1 MATERIALS

A. Manually Operated Projection Screens: (classrooms)

1. Bracket-mounted or ceiling-suspended, metal-encased screens.

B. Electrically Operated Projection Screens:(conference room)

1. Surface-mounted, metal-encased screens.
2. Suspended screens without ceiling closure.

C. Front-Projection Screen Material: Multipurpose reflective viewing surface.

1. Size: As appropriate for room size.

END OF SECTION 11132